

Notice of Allowability

Application No.

10/614,366

Examiner

Adolf DSouza

Applicant(s)

MIAO, GEORGE J.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/15/2007.
2. ☒ The allowed claim(s) is/are 25 - 32, 46 which have been renumbered as set forth in the Office Action.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.


4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other PTO 413B.


DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER

1. Claims have been renumbered as shown below:

- Claims 25 - 32 are renumbered as claims 1 – 8 respectively.
- Claim 46 is renumbered as claim 9

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with George Miao (Applicant Pro Se) on 9/6/2007

The application has been amended as follows:

IN THE CLAIMS:

(a) Replace claim 25 by:

A spread spectrum based multichannel modulation Ultra-Wideband (UWB) communication transceiver for comprising:
a pseudorandom noise (PN) sequence look-up table coupled to a multichannel PN sequence mapping;

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the multichannel PN sequence mapping coupled to a digital lowpass finite impulse response (FIR) shaping filter; and

the digital lowpass FIR shaping filter coupled to a digital-to-analog (D/A) converter;

wherein multichannel PN sequence mapping comprises:

N-1 delay units coupled to N down sampling units followed by N Exclusive OR (XOR) units in parallel, and said N XOR units connected to a PN sequence look-up table, where N is an integer and greater than 1.

(b) Replace claim 46 by:

A spread spectrum based multichannel modulation Ultra-Wideband (UWB) communication receiver comprising:

a low noise amplifier (LNA); a multichannel-based multicarrier down converter; an analog-to-digital (A/D) converter;

a digital receiver lowpass finite impulse response (FIR) filter;

a rake receiver; an equalizer;

a despreading for pseudorandom noise (PN) sequence and demapping;

a block deinterleaver; a decoder;

a PN sequence look-up table coupled to the rake receiver and the despreading for PN sequence and demapping;

an channel estimator coupled to the rake receiver and the equalizer;

a synchronization and time control connected to the multichannel-based

multicarrier downconverter, the digital receiver lowpass FIR filter, and the rake receiver;

and a multichannel control connected to the multichannel-based multicarrier downconverter, and the despreading for PN sequence and demapping;

wherein the despreading for a pseudorandom noise (PN) sequence and demapping produces an UWB symbol rate at 446 Msps.

(c) In claim 26, 2nd last line, change "N and Q is greater" to "N and Q are greater"

(d) In claim 26, 2nd last line, change "L is greater and equal to 1" to "L is greater than or equal to 1"

(e) In claim 31, 2nd last line: delete the word "approximately"

(f) In claim 32, last line: delete the word "approximately"

(g) In claim 46, last line: delete the word "approximately"

Reasons for Allowance

3. The prior art of record, including Crochiere, Tewfik, Fattouche and Graham fail to teach or suggest a method wherein the multichannel PN sequence mapping comprises:

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N-I delay units coupled to N down sampling units followed by N Exclusive OR (XOR) units in parallel, and said N XOR units connected to a PN sequence look-up table, where N is an integer and greater than 1.

4. Claims 25 – 32, 46 are allowed.
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolf DSouza whose telephone number is 571-272-1043. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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